**BLIP TESTING PROCEDURE CDMS 8 Oct. 1998**
**Q BIAS: BOARD # _____ STATUS _____ DATE _____**

Q INNER BIAS SECTION:

1. Test connections and set up:
- Measure QI Bias at QI Bias Mon. and Mux. 1 output connectors on the front panel and at the Aux. output of the Breakout Box(BOB).
- Use a DMM and oscilloscope to measure the outputs.

2. Power up settings:

| | |
|---|---|
| QIDAC OUT: | 10V |
| QI I MON: | 1(off) |
| GRND Q INNER: | 1(on) |

3. **Test preparation**:

**Readfile qbias.macro**

| | |
|---|---|
| Set DAC to 1V: | ***QIDAC(1)*** |
| Turn off current mon.: | ***QiImon(0)*** |
| Unground QI: | ***gndQI(0)*** |
| Select Mux 1 output: | Mux1(QiVmon) |

| | |
|---|---|
| QIDAC OUT: | 1 V |
| QI I MON: | 1(off) |
| GRND Q INNER: | 0(off) |

4. **QI Bias Test:**
**Input settings in Step 3 before starting test.**

Set QIDAC to different values from -10V to +10V and record measurements

***QIDAC(x)*** Note: x = -10 to 10

| | |
|---|---|
| QIDAC OUT: | -10 to +10V |
| QI I MON: | 1(off) |
| GRND Q INNER: | 0(off) |

**Is the output linear? _____**

**Does front panel readout match breakout box reading within 0.1V?**
**_____**

| DAC | BOB | Front Panel | Mux 1 | Mux 2 |
|---|---|---|---|---|
| 10 | | | | |
| 5 | | | | |
| 2 | | | | |
| 0 | | | | |
| -2 | | | | |
| -5 | | | | |
| -10 | | | | |
| | | | | |

5. **Ground Bias Test:**
**Input settings in Step 3 before starting test.**
Ground QI: ***gndQI***

| | |
|---|---|
| QIDAC OUT: | 1 V |
| QI I MON: | 1(off) |
| GRND Q INNER: | 1(on) |

**Does output go to Zero? _____**

6. **QiImon test:**
**Input settings in Step 3 before starting test.**

| | |
|---|---|
| QIDAC OUT: | 1 V |
| QI I MON: | 0(on) |
| GRND Q INNER: | 0(off) |

Turn on current monitoring: ***QiImon(0)***
Set Mux. 1 to monitor current: ***Mux1(QiImon).***

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**Q BIAS: BOARD # _____ STATUS _____ DATE _____**

Vary DAC settings and monitor Mux. 1 for changes.
**Do changes occur? _____**
**Are the changes linear? _____**

## Q OUTTER BIAS SECTION:

1. Test connections and set up:

- Measure QO Bias at QO Bias Mon. and Mux. 2 output connectors on the front panel and at Aux. output of the Breakout Box(BOB).
- Use a DMM and an oscilloscope to measure the output.

2. Power up settings:

| | |
|---|---|
| QODAC OUT: | 10V |
| QO I MON: | 1(off) |
| GRND Q OUTTER: | 1(on) |

3. **Test preparation**:

**readfile qbias.macro**

| | |
|---|---|
| Set DAC to 1V: | ***QODAC(1)*** |
| Turn off current mon.: | ***QoImon(1)*** |
| Unground QO: | ***gndQO(0)*** |
| Select Mux 2 output: | *Mux2(QoVmon)* |

| | |
|---|---|
| QODAC OUT: | 1 V |
| QO I MON: | 1(off) |
| GRND Q OUTTER: | 0(off) |

4. **QO Bias Test:**
**Input settings in Step 3 before starting test.**

| | |
|---|---|
| QODAC OUT: | -10 to +10V |
| QO I MON: | 1(off) |
| GRND Q OUTTER: | 0(off) |

Set QODAC to different values from -10V to +10V and record measurements
***QODAC(x)*** Note: x = -10 to 10

**Is the output linear? _____**

**Does front panel readout match breakout box reading within 0.1V? _____**

| DAC | BOB | Front Panel | Mux 1 | Mux 2 |
|---|---|---|---|---|
| 10 | | | | |
| 5 | | | | |
| 2 | | | | |
| 0 | | | | |
| -2 | | | | |
| -5 | | | | |
| -10 | | | | |

5. **Ground Bias Test:**
**Input settings in Step 3 before starting test.**

| | |
|---|---|
| QODAC OUT: | 1 V |
| QO I MON: | 1(off) |
| GRND Q OUTTER: | 1(on) |

Ground QO: ***gndQO***
**Does output go to Zero? _____**

| | |
|---|---|
| QODAC OUT: | 1 V |
| QO I MON: | 0(on) |
| GRND Q OUTTER: | 0(off) |

6. **QoImon test:**
**Input settings in Step 3 before starting test.**

Turn on current monitoring: ***QoImon(0)***
Set Mux. 2 to monitor current: ***Mux2(QoImon).***

Vary DAC settings and monitor Mux. 2 for changes.

**`Do changes occur?`** _____

**`Are the changes linear?`** _____